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ABSTRACT

This paper provides participant observations regarding the use of computer and broadcast television technology at a suburban public elementary school in Athens, Georgia during the 1995-1996 school year. The paper describes the hardware and software available in the school, and the use and misuse of computers and broadcast television in the classroom. Word processing software was the most frequently used and productive classroom tool. Student misuses of computer technology included: inappropriate expectations, procrastination, and "digital delinquency" such as loading non-educational games, and typing inappropriate poems and stories. Teacher misuses of technology included: searching of the Internet during the class, without prior identification and previewing of sites, and the use of electronic fraction bars which were more easily used in their regular plastic form. The difficulties with a student-produced broadcast of the morning announcements are discussed. Conclusions from the year-long observation include: (1) infusions of hardware and software alone will prove to be educationally ineffective--ongoing teacher training and school level support are essential; (2) disadvantaged youth need greater access to computers during school hours than their more well-to-do peers who often have technology resources at home; and (3) legitimate educational goals derived from established curriculum guidelines must drive the use of electronic technology. (SWC)

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ED 410 949

Observations on the Use of Computer and Broadcast Television Technology in One Public Elementary School

by

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Abstract: What follows is a report of participant observations regarding the use of computer and broadcast television technology at one suburban public elementary school in Athens, Georgia during the 1995-96 school year. During my year-long fifth grade teaching experience I kept observations of students, other teachers, and my own uses of these technologies. This paper summarizes my observations regarding the utility and impact of this technology use.

Presented at the Annual Conference of the
National Council for the Social Studies
College and University Faculty Assembly
Washington, D.C.
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Introduction

My Background

Early Experience

I've been a social studies educator for the past 18 years, working at four universities around the country in a variety of settings, from teacher education, to project evaluation, curriculum development, and research. I've taught computer education courses at three of these institutions. My own computer training dates back to the late 70s when I took my first computer classes in the Boulder Free School, dreamt about owning a Radio Shack Model I micro and worked often at the CU Computing Center interacting with a Control Data Corporation mainframe running the very first interactive version of SPSS.

Love of Social Studies

My interest in and enthusiasm for computers, however, has always been secondary to my love of social studies and my efforts to share that love as I work with other educators to prepare future elementary and middle school teachers. Sadly, my own elementary and middle school teaching experience occurred before computers were widely used in the classroom.

My Year in a Fifth Grade Classroom

Return for 95-96

During the 1995-96 academic year, after a 17 year absence from the elementary school classroom, I returned to teach a full year as a 5th grade teacher at a public school in Athens, Georgia. One of my key objectives for this year-long exchange was to implement, as fully as possible, all of the things I had learned about the use of computer technology as a university professor.

Eye Opener

My year in the classroom was an eye-opener. I renewed my knowledge of the demands of classroom teaching and tested my physical and emotional limits. I'm still sorting out my experiences, which have been transcribed and cataloged and hopefully will serve a the basis for a book that my exchange partner and I plan to begin writing this winter.

Still School

Depending on your point of view, it's either good news or bad news that school is still school despite the infusion of computer technology. The rhythms and rituals of schooling are little changed by

the infusion of computer technology. The importance of gaining a full mastery of concepts and skills in the the basics has not decreased. Methods and materials haven't changed all that much in the past 17 years either. Computers and broadcast television, in my view, simply offer another avenue for learning or medium for instruction.

Focus Restricted to Technology

I will restrict my focus here to the realm of teachers' classroom use of technology--mainly computer technology, but also broadcast television technology. I review students' use, other teachers' use, and my own use of these technologies within the school during my one-year exchange. I'll begin by describing the hardware and software in use at the school and then turn to the use of technology and the misuse of technology.

The Use of Computer Technology

Computer Hardware

Variety Still Present

In the school in which I did the exchange, teachers still use a variety of computer hardware. Macintosh computers, especially the newer Power Macintosh machines, were the most frequently encountered and most sought after computers. After that came a dozen or so older Macs spread around the school, then 30 older IBMs, used in the Jostens computer lab, and finally a mix of old Apple II machines and some non-hard drive PC clones, both of which I observed, sat completely unused. This picture reflects the fact that schools have been acquiring computers for the past 10 to 15 years, advances in technology, the expiration of warranty and maintenance contracts, and the fact that my school, like most other public and private schools, accepts and attempts to use donated but often outdated business and home computers.

Printers

Color ink-jet printers were very popular and sat by the new Power Macs that were located in three different wings of the school building. Regular ink-jet printers were also being used, mostly by teachers and administrators. The school had one LaserWriter, housed in the art teacher's room, and a second LaswerWriter located in the media center. There was one IBM QuietWriter that had belonged to the previous Principal. Other printers around the school were of the dot-matrix variety.

Scanners, Modems, Network

In addition to this hardware, there was one color scanner, two yet-to-be-installed netware modems, and a yet-to-be-made-operational fiber

optic network.

My Own Classroom

My own classroom came equipped with one non-hard drive Model 25 IBM and an old IBM dot matrix printer. I quickly discovered that neither worked. By luck, and scrounging at home, in my office, and around the school, I eventually ended up with two working Model 25 IBM's, two IBM ThinkPad 486 Laptops and three Macintosh computers (my old 512KE, a Mac Classic from my department, and my personal PowerBook 520c). The Classic was hooked to an HP DeskWriter (a non-color ink-jet) that I also hooked to my PowerBook when I needed to print. The Mac 512KE was hooked to an ImageWriter I. One of the IBM Model 25s was mated to the schools only IBM QuietWriter, and the IBM Laptops shared a non-color HP ink-jet.

In addition to these computers, I had access to a QuickTake digital camera, an Apple Presentation display devise, a large screen television, an 8 mm camcorder, and a telephone line. The large screen television was connected to the school's cable system and satellite dish.

Computer Operating Systems

OS Variety Still Present

The school had a variety of operating systems in use. The predominate OS in my school was MacOS, even though the school district's technology coordinator wanted all schools to run Windows OS/Intel CPU machines. It appeared that Macintosh computers, or rather computers running MacOS, were heavily favored for their ease of use and the stability of their system. I'm certain that a core of computer literate teachers in the school who favored Macs influenced this situation.

My Own Classroom

Due to the variety of computer hardware in my classroom, I had a wide variety of operating systems too. My two Model 25 IBM's ran an old version of DOS, the two IBM ThinkPad 486 Laptops ran Windows 3.1, and the three Macintosh computers ran versions of MacOS(the old 512KE ran System 6.5, the Mac Classic ran System 7.1, and the PowerBook 520c ran System 7.5). Despite my best efforts at training everyone and the use of on-call "student expert" computer assistance teams for each OS, I had great difficulty getting students to use all of these different machines without repeated frustrations and occasional disasters.

Students' Computer Use

Most Favored Categories

Around the school a variety of software was in use. In my room the most favored applications were educational simulations, CD-ROM encyclopedias, and topically-focused encyclopedia-like CD-ROM databases. These programs were used mostly for research and independent exploration when all assignments were finished. CD-ROM encyclopedias were strongly preferred over print versions. My students also occasionally used programs designed to aid in the production of computer-based multimedia presentations. Photographs, scanned images, and student-created drawings were incorporated into these presentations and occasionally incorporated as a part of the school's Web page.

Word Processors Most Used

My students used word processors to write stories, take notes on textbook chapters, and create reports. They would use whatever word processing software was available on a particular machine, often expecting, incorrectly, that all the programs would work in a similar fashion. Inexperience in the various word processors caused many problems. This category of software was the most frequently used and productive classroom tool.

Evidence of this use lies in my students' frequent requests to work in small groups (usually three or four) taking notes on their science or social studies reading. This type of activity, first encountered in my room for these students, often employed all of the computers simultaneously, with small groups at each machine. One student, usually the one with the best keyboarding skill, would operate the computer while the others read the assigned material and discussed how best to take down the information in note form. Discussion ensued regarding which ideas were most important. Students dictated and critiqued their sentences, often combining simple sentences and suggesting modifications such as simple abbreviations. The printing of multiple copies was the reward for their work. Students guarded their group's notes and seldom shared their work with others--even students who had been absent from school due to illness. The fact that I occasionally allowed the use of these collaboratively compiled notes on chapter tests no doubt increased their value.

Little Used Utilities

Little instructional value was obtained from the availability of spreadsheets, databases, or paint and draw programs. My students treated paint and draw programs like an electronic chalkboard. Serious diagrams or drawings never appeared from my students' work on the school's computers. An occasional computer generated graphic came in

on the cover of reports produced at home, but these were often lifted from CD-ROM and Internet sources and the few that were original may have been the result of some older person's assistance. Prepared freeware spreadsheets and databases evoked little interest and these tools for thinking appeared to be either beyond my fifth grade students' abilities or outside of their range of interests. Speadsheets were used for tax and tuition collections in the city government strand of the school's microsociety, but this use entailed substantial training demands and created its own set of problems related to faulty data entry and accidental deletions of tax and tuition payer's records. The communications tools of the ClarisWorks and MSWorks programs received no use since connections to the outside world were made through other applications, namely InterSLIP and America On Line.

Best Getting Better

While school is still school, it is clear that the best students are getting better and I believe that electronic technology is playing a strong role in this phenomenon. For example, my top readers performed at the late senior high school level--five or six years beyond the national norms for 5th graders. These students read widely, not only in popular adult novels, but also in adult references, news publications, and print resources located on the Internet. These same students produced sophisticated, word processed, graphically illustrated reports on topics they negotiated with me. The reports were researched on computers using CD-ROM databases and encyclopedia software and through connections to the Internet. Some top students also had access to these tools from their homes. These reports were completed with limited parental participation. The report guidelines, which included mutually agreed upon limitations for parental involvement, were generated in a small group setting with the students viewing and contributing to a word processed document that took shape before their eyes as I used my PowerBook and the presentation adapter devise to display the report specifications on our large screen television.

Teachers' Computer Use

Typical Use

Virtually every teacher had a classroom computer. Most often these were Macintosh or Power Macintosh machines with large hard drives and a supply of student-oriented software that teachers had selected to fit their curriculums and purchased with small amounts of money made available though the PTO. Newer computers also came with pre-loaded software and a supply of education oriented CD-ROM programs.

Some teachers turned on their newer computers early in the morning and let early arriving students use software on the machines. Some teachers used their computers for professional correspondence, making worksheets for students, or other tasks that could be accomplished with a word processor. So far as I knew, no teacher in my wing of the school used the computer for a gradebook or for daily planning tasks.

Teachers who had access to an e-mail account, either through the local university's College of Education, or through a commercial account, would check their e-mail through one of the computers that had a modem and phone line. A few were able to use their graduate student status or other professional associations with the university in order to gain access to the World Wide Web. These same teachers were the ones who created the school's own Web page, to my knowledge one of the first elementary schools in the nation to have this high tech presence in cyberspace.

Despite the widespread presence of computer technology, many teachers used their classroom machines with minimal understanding. Symptoms of this lack of understanding included lack of familiarity with common terminology and techniques for using the computer's operating system and limited facility with the software programs that they used. An example of the first type of problem was the common problem of finding items they had saved to unknown locations (folders). This easily solved problem caused considerable frustrations and occasional panic. An example of the second type of problem was the difficulty a few teachers had in creating a large single word processing document from a collection of smaller files contained on separate disks. Some teachers simply didn't know they could get several documents from different disks open at one time and some others lacked the knowledge of how to cut and paste between two documents--a beginner's level task that had either never been explained or a piece of basic training that had slipped from the person's consciousness. These problems reflect the lack of time teachers have for training, practice, and the application of technology skills. There is, simply put, not enough time in the teachers' day to learn new software or become proficient in a computer's operating system.

Teachers were often not responsible for the set-up, organization, and look and feel of their machines. The features of the operating system software, such as the locations of applications, the organization of folders, and even such details as the speed of the mouse, the double click rate used to activate files, and the differing views of the computer's files were all determined by someone else. Teachers seldom modified, used, or knew much about such operating system features. Use of software applications was similar--teachers often knew just enough to get by and little more. Some even lacked knowledge of the availability of

built-in help features--a universal aspect of Macintosh software.

My Personal Use of Computer Technology

Overview

I set out on my year-long teaching exchange experience with a plan to use as much technology as possible, convinced that my own use of computer technology could make me a better teacher. I had used ClarisWorks for some time, so it was a natural choice for my own classroom planning and administrative use. What follows is a description, categorized by tool functions, of how I used this program.

Word Processing

The ClarisWorks word processor is a versatile tool, capable of performing almost any writing task. I used the word processor to produce teacher made tests, worksheets, and notes to parents, students, teachers, and administrators. The word processor was also used to create a class roster (names exported from the database, but then enhanced for posting on the door), and a homework assignment log and check sheet. I created bathroom and hallway passes with graphics, wrote and spell checked long e-mail messages, composed weekly phone homework help announcements, and created numerous large print signs that reminded students of classroom procedures, rules, and values slogans required for the state-wide values education curriculum.

Databases

Perhaps my biggest computer-as-tool success was the use of my personal PowerBook as database for streamlining my daily lesson planning work. I often sat with the teacher's guides open and entered new daily plans for the coming week into a ClarisWorks planning database that I created (see Figure 1). This electronic planbook was modeled after the paper planbooks sold in many teacher's supply stores. However, it had the distinct advantage of being more flexible, allowing the easy movement of postponed topics and the alteration of plans without messy erasures. In addition, the different views provided in the database allowed me to see the sweep of instruction over several weeks and plan ahead with an eye fixed, literally, on the children's past learning in a specific subject. Ease in copying phrases used over and over again also sped up my daily planning. Like its print counterpart, this database serves as a record of what I actually taught in each subject for the entire year. Unlike its print counterpart, however, this information is available for updated use in coming years.

Another database I created and used was a student information database that contained, for each student, information on parents'

names, phone numbers, emergency contacts, bus numbers, behavior problem reports and, yes, a digital photograph of each child. I used this database mainly at night to call parents and talk about school problems. The notes on behavior problems proved useful in several instances.

The only other database that I used regularly was a database of every 4th and 5th grader in the school that participated in the school's microsociety. This database included each student's name, his or her job title, salary, and break schedule. It was used to create plastic laminated name tag IDs that were required to be worn while at work in microsociety each afternoon. As the faculty member in charge of the government strand of microsociety, I took over the responsibility of entering these data and keeping them up-to-date. My ID assistants collected badge fees, cut out, and laminated the ink-jet printed badges.

Spreadsheets

My most intensive use of the ClarisWorks spreadsheet tool was in keeping a separate spreadsheet gradebook for each subject. As any teacher knows, one of the biggest, most time consuming, and frequently recurring tasks is work assignment and test correction. The old fashioned method was to post scores into a paper gradebook and periodically use a calculator to figure each child's average. A spreadsheet gradebook automates the calculation task, though it does not reduce the correction or posting work.

I used my subject specific spreadsheet gradebooks intensively on a daily basis for my own record keeping. I also used the capabilities of ClarisWorks to cut and paste student's grades into notes home and into displays for conferences with parents.

I kept up with my frequently changing daily schedule with a spreadsheet specifically designed to display each day's activities. I kept a print out of this important scheduling document on a clipboard along with the daily lesson plans so that I could keep track of where we were supposed to be and what we were supposed to be doing.

Draw and Paint Utilities

My only instructional use of these utilities was in small group math instruction on fractions and decimals. I used the drawing program in ClarisWorks to generate electronic fraction bars that could be manipulated and colored at will as a visual demonstration for the students. The students liked this use of technology though the demonstration could have been more easily accomplished with the school-supplied fraction bars that were cut from transparent pieces of plastic.made to be used on a standard overhead projector.

Use of the Internet

By mid year I had located an available phone line and split it into three legs for use in the three 5th grade classrooms. My wiring connections weren't elegant, but they did work. So in the second half of the year on several occasions I tried small and large group demonstrations of Internet use. We were connected through local phone lines to the university running an InterSLIP connection at 14.4 bps. Our Web browser was Netscape 1.1. We had no trouble connecting to the university but considerable difficulty with sites that were too busy or temporarily out of service. In general, students had trouble waiting for the computer to finish its navigation and complete its graphics. Transfer times were on the order of 15 to 30 seconds, but that seemed like an eternity when the result was yet another gateway or path to follow. Five minutes of navigation causes symptoms of extreme boredom that may well erupt into some form of verbal or physical disruption. It was during these sessions that I became convinced that our Internet Web destinations would have to be pre-specified by me, right down to the level of pay dirt. True, a pair of motivated students could navigate the Web without behavior problems for up to 30 minutes, but trouble loomed with more students or less motivation.

In the end I did no more demonstrations of Netscape with either large or small groups. Students whose parents had signed Internet use agreements used Netscape individually or in pairs while in the media center. Alternatively, I would use Netscape at home and do the searching and retrieval myself, providing the students with a disk of information that I had selected. This latter strategy took much of the risk and frustration out of our Web use, but it added yet another late night teaching task to my already over-full days. In addtion, students were really not using the Internet, at least not as independent information seekers.

Use of America On Line

In addition to Web browsing via a Netscape connection to the university, America On Line installed its 14.4 bps local phone numbers sometime in late fall of 1995 and we began using this service, connecting via our two IBM laptops. Our main use of AOL was for an e-mail communication project that took place between our school and a university located in another state. Students would compose their e-mail messages off line and then connect and send their mail as a batch of messages during a flash session. College of education students would reply to the students in the following two or three days. I monitored the outgoing and incoming messages for suitability, but not grammar or spelling.

This was the second year of this e-mail project, and I found out that it was the project that had paid for the phone line to our section of the

building. Some of my students had participated in the project as fourth graders so they were familiar with the e-mail software and Windows 3.1 OS interface. Nevertheless, we had considerable trouble connecting to and using AOL for this project.

On occasion I downloaded current weather maps and news stories from AOL for use in the classroom. Students observed as I did this and seemed to like the fact that we could obtain such information quickly and easily. This information aided our discussions about weather phenomena and current events. I had, on most occasions, pre-read the stories the night before and hence knew of their existence and suitability for classroom use.

The Misuse of Computer Technology

Students

Inappropriate Expectations.

Students naively expected computers to solve or at least dramatically ease their learning needs. Many times they assumed that the information they needed "was on the hard drive" even when it wasn't and, in some cases, even when the machine available for their use didn't have a hard drive. Their thinking seemed to be that if they had seen the type of information they wanted on one machine, it would be there on the next. Disappointment and frustration showed when they realized that their information or learning needs were not going to be easily or quickly met. Occasionally, having been disappointed more than once, students would overgeneralize and move toward the opposite logic, falsely expecting that one and only one computer would have the capability or information that they needed.

Procrastination Exacerbated

The presence of computers tended to exacerbate students' tendency to put off school work--especially research and report writing--until the last minute. The physical appearance of a nicely printed essay or report took precedence over substance for many of my students. Emphasis seemed to be on getting something out of the machine rather than getting ideas out of one's mind. Speed, again, became important due to lateness, so much so that some students were too rushed to even spell check their work.

Digital Delinquency

Occasionally I would find even my best students doing something on one of the computers that could at best be described as goofing off. An example that recurred was students managing to bring in non-

educational games to play. For example, Missile Command was the favorite on the oldest Mac, and though I kept trashing the program, it kept showing up over and over again. (One needs a sense of humor for this type of thing.) I would also find that some students had written inappropriate poems and stories on occasion. My best example of this came from a female student who gave me fits virtually all year. Dispite her instructional intractability, she managed to get the entire lyrics to a popular and semi-vulgar rap song flawlessly entered and perfectly formatted before I caught on to what she was doing. Students also loved to doodle in the paint and draw programs, but I personally did not consider this to be delinquency. Perhaps a better or more experienced manager of classroom routines might have avoided some or all of these forms of computer-based misbehavior--though I doubt it. The mere presence of computers introduces new opportunities for classroom trouble--as would the introduction of wet clay, microscopes, or any other tool for learning. Material and child management demands increase as the educational environment is diversified and enriched. The introduction of opportunities for misbehavior is a price we gladly pay for most forms of educational enrichment.

Despite the potential for real trouble, I had very few instances of deliberate destruction of computer files or software. Only once did a student deliberately highlight and delete another person's unsaved report. The loss caused tears and a stiff sanction on the offender's future computer use. No pranks of hiding others' disks or files on the hard drives were played.

My Own Misuses

Internet

In retrospect I can see that my first attempts to use the Internet with my class was a misuse of technology. It is simply inappropriate for a teacher to be using a search engine to navigate search-engine identified sites while students look on. This is a waste of valuable classroom time and can easily turn up inappropriate and unproductive sites. The correct approach is to identify and preview all sites before they are accessed. Only then will a teacher know if the site has appropriate, curriculum related material.

I would also classify my use of the electronic fraction bars a misuse since they were no improvement over plastic fraction bars that could be placed on an overhead. The electronic fraction bars had the added disadvantage of requiring considerable computer expertise for use and this same factor prevents students from being able to easily model their own fractions as they might with regular plastic fraction bars.

School's Own Broadcast Studio

The elementary school in which I taught had just received equipment that would allow students to create a full scale television production. Included were cameras, editing equipment, lights, and other production equipment. Normally morning announcements were broadcast over the school's intercom, often making use of students who reported school news and led the school through the pledge of allegiance. The principal would make announcements and then the coach would come on and lead the entire school in a few minutes of wake up exercises. This entire program took less than 7 minutes and ran virtually without problems.

With the development of the school wide television broadcast the morning announcements changed. Suddenly the morning television broadcast was consuming between 10 and 12 minutes. In additon, it was usually airing 3 to 5 minutes later than planned. The result was a delayed start of the first period of instruction. In addition, the children involved in the production of the televised mornng news, many of whom came from my own fifth grade classroom, missed homeroom completely and would arrive after other students had left for their first period class (usually P.E., Art, or Music).

Despite the obvious problem of time loss for the entire school and the hurried start of the day for a dozen or so 5th graders, the televised morning broadcast introduced a problem that haunts regular prime time news: trying to find interesting video images to occupy the broadcast. I vividly recall one rather long segment on cake decorating that was festooned with close-ups of multicolored icing. The cakes were to be later auctioned off as a part of a fund raiser, but this bit of information seemed to escape the audience in my room. Students sat in passive video bliss as the announcer tried desperately to fill the soundtrack with something as sweet as the multicolored icing. I watched as the clock once again rolled past the start of first period instruction and began wondering about the educational merit of the feature and the the ultimate advisability of the entire televised morning announcements. Exactly how many children were benefiting from the production experience? Perhaps two dozen at most. Was this format for morning announcements more time efficient than the intercom? No, not at all. Did the students pay better attention? No, they did not. Was it important to have a video component to the morning announcements? No, not in my opinion.

On the upside of this picture was the positive publicity the new broadcast studio generated for the school. It made the local paper. The local cable channel planned to feed the morning broadcast to the entire community. Several students became school celebrities, not because they were academic successes but because they had the gift of gab and did great interviews.

But even school television stardom has its price. The parents of two of the TV anchors who came from my room expressed doubts about the activities

of their sons. Could I help them catch up with their assignments? Could I give their sons special assistance in specific subject areas and help monitor their rushed daily schedules? Threats of removal from stardom loomed heavily as these 10 and 11 year old boys struggled to be successful in their school work and supplementary activities.

Satellite and Cable TV

In addition to having its own television studio, my school had a satellite dish and free basic cable service. Neither of these sources were much used. Students in my room occasionally tried to watch cartoons instead of the morning announcements broadcast. Members of my AV crew quickly ended all such foolishness.

The school's new media person actively solicited teachers' input regarding the use of PeachStar and other satellite programs and offered to videotape anything that we had rights to. Teachers identified programs and later received videotapes that could be integrated with their classroom instruction. My own experience with this approach was not too successful due to the limited avaiability of content-relevant and age-appropriate shows and the technical problems we had in securing high quality video and audio signals.

Conclusions

While this represents a preliminary report of my observations, I did come away from this one-year exchange with strong views about how computers and other electronic technologies are currently being used and how this use could be improved. Three cautions are in order. First, it seems clear that infusions of hardware and software alone will prove to be educationally ineffective. Without adequate, ongoing teacher training and school level support even the newest generation of user friendly computers and software will fail to produce the desired educational results. Second, it seems clear that disadvantaged youth are being left behind in the information revolution. Simply put, they need greater access to computers during school hours than their more well-to-do peers. Effective use of technology takes not only resources, but time. When technology resources are not available in the home, extra time for their use must be provided at school. Third, it should be remembered that legitimate educational goals derived from established curriculum guidelines must drive our use of electronic technology[1]. Otherwise we may employ technology to no avail or achieve unintended outcomes at the expense of much desired educational results. Taking these cautions to heart, I believe that teachers should redouble their efforts to employ these technologies in service of meaningful educational goals.

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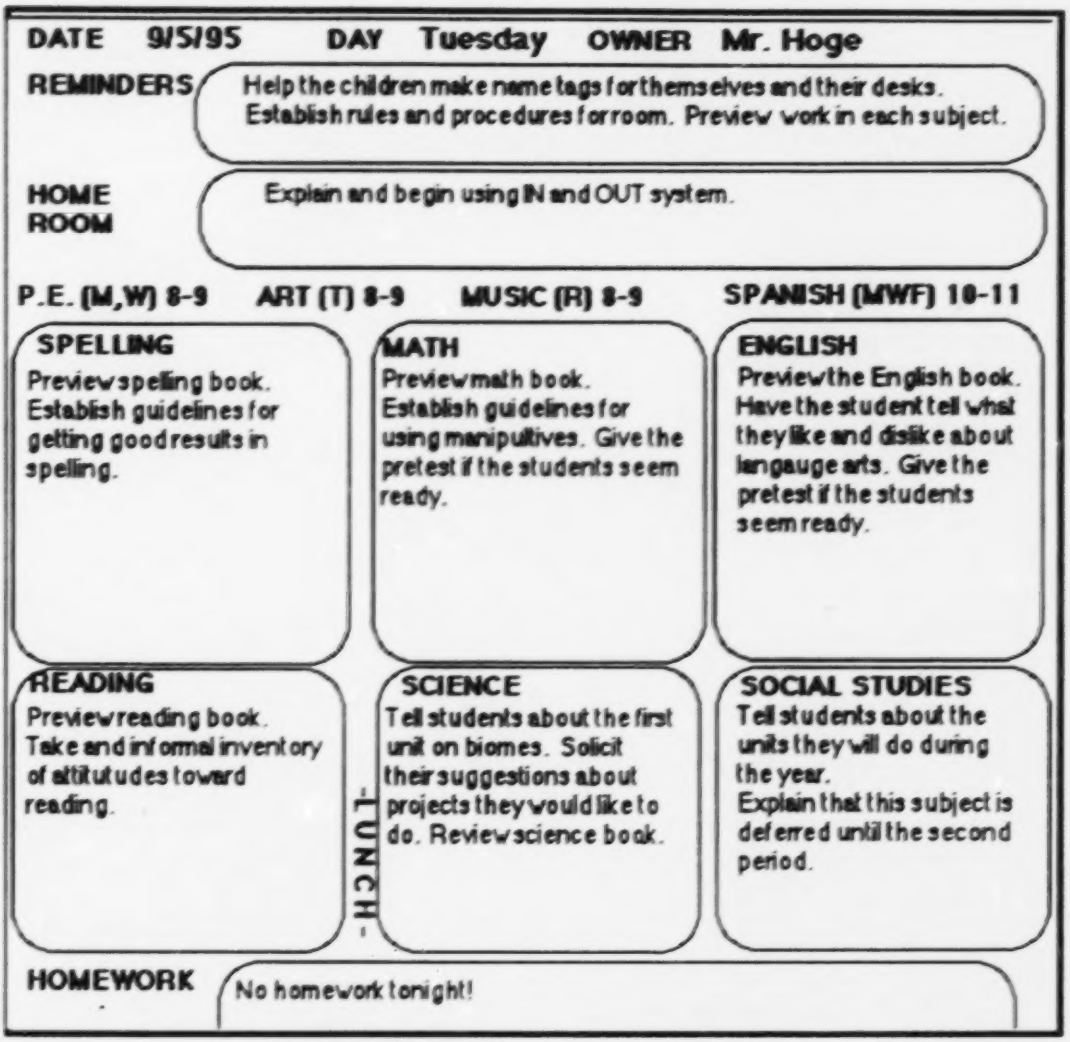
[1] Clifford Stoll and Douglas Noble echo my three cautions in a recent issue of *Educational Leadership*.

References

Noble, D. D. (1996). Mad rushes into the future: The overselling of educational technology. *Educational Leadership, 54*(3), 18-23.

Stoll, C. (1996). On surfing-and steering-the net. *Educational Leadership, 54*(3), 13-16.

Figure 1. Sample of Daily Lesson Plan Database


DATE 9/5/95 DAY Tuesday OWNER Mr. Hoge
REMINDERS
Help the children make name tags for themselves and their desks. Establish rules and procedures for room. Preview work in each subject.
HOME ROOM
Explain and begin using IN and OUT system.
P.E. (M,W) 8-9
ART (T) 8-9
MUSIC (R) 8-9
SPANISH (MWF) 10-11
SPELLING
Preview spelling book. Establish guidelines for getting good results in spelling.
MATH
Preview math book. Establish guidelines for using manipulatives. Give the pretest if the students seem ready.
ENGLISH
Preview the English book. Have the student tell what they like and dislike about langauge arts. Give the pretest if the students seem ready.
READING
Preview reading book. Take and informal inventory of attitutudes toward reading.
LUNCH
SCIENCE
Tell students about the first unit on biomes. Solicit their suggestions about projects they would like to do. Review science book.
SOCIAL STUDIES
Tell students about the units they will do during the year. Explain that this subject is deferred until the second period.
HOMEWORK
No homework tonight!